ABSTRACT OF THE DISCLOSURE

An apparatus and method for controlling data communication in a wireless local area network (LAN) can check a remaining power level of a host computer battery and determine a data transmission characteristic such as a data transfer speed and/or power save mode period based on the checked battery power, and then adjust the current data transfer speed or power save mode period according to the determined value. For example, a controller of a wireless LAN can transmit information corresponding to the determined transmission characteristic to an access point or another station. Therefore, a station of the wireless LAN card can reduce or prevent power of the battery from being abruptly diminished because of use of the wireless LAN.